NAS633 (UNS S35000)

High Strength Stainless Steel

NAS633 is a semi-austenitic precipitation-hardening stainless steel. It has excellent workability after solution heat treatment and also offers good weldability. High strength can be achieved through heat treatment.

Steel Grade/Standard

Nippon Yakin Grade	ASTM A693
NAS633	UNS S35000

Chemical Composition

[wt %]

	C	Si	Mn	P	S	Ni	Cr	Mo
Specification (ASTM A693 TYPE633)	0.07~0.11	≦0.50	0.50~1.25	≦0.040	≦0.030	4.0~5.0	16.0~17.0	2.5~3.2

Mechanical Properties and Hardness

Table 1: Mechanical properties ASTM A693

Thickness (mm)	Heat Treatment	Finish	Proof stress (N/mm2)	Tensile strength (N/mm2)	Elongation (%)	Hardness (HV)
0.05~0.13 excl	Solution	BA	≦595	≦1380	≧8	≦302
0.13~0.25 excl	Solution	BA	≦585	≦1380	≧8	≦302
Over 0.254	Solution	BA	≦585	≦1380	≧12	≦302
Example 0.254	Solution	BA	481	1230	23	256

Table 2 Example of mechanical properties after SCT

Treatment	Processing conditions	Thickness (mm)	Proof stress (N/mm2)	Tensile strength (N/mm2)	Elongation (%)	Hardness (HV)
Ageing SCT850	930°Cx10min ⇒ -73°Cx3hr⇒455°Cx3hr	0.254	1413	1605	8	465

Production capability

Finish : BA
Thickness : 0.05mm 〜 0.5mm
Width : 5mm 〜 510mm

Application

Welded bellows, Formed bellows

For more information, please contact:
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